XR-C610/C620

US Model
XR-C610/C620
Canadian Model
E Model
XR-C610

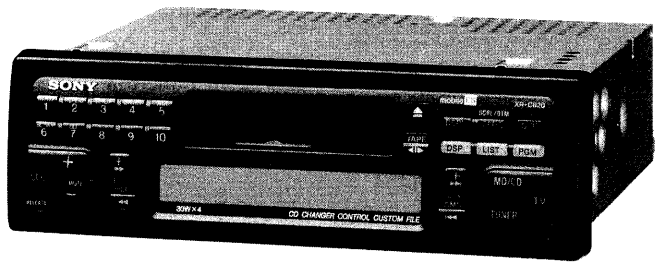


Photo : XR-C620

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	XR-C410
Tape Transport Mechanism Type	MG-50B3-39

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US MODEL)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
12 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

Other Specifications

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 20,000 Hz
Signal-to- noise ratio	

Cassette type	Dolby B NR	Dolby C NR	Dolby NR off
TYPE II, IV	67 dB	73 dB	61 dB
TYPE I	64 dB	70 dB	58 dB

Tuner section

FM

Tuning range	US, Canadian model : 87.5—107.9MHz E model : FM tuning interval : 50kHz/200kHz switchable 87.5—108.0MHz (at 50kHz step) 87.5—107.9MHz (at 200kHz step)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.5 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

—Continued on next page—

FM/AM CASSETTE CAR STEREO
US, Canadian Model

FM/MW/SW CASSETTE CAR STEREO
E Model

SONY®

AM (US, Canadian model)

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	30 µV

MW (E model)

Tuning range	MW tuning interval: 9kHz/10kHz switchable 531—1,602kHz (at 9kHz step) 530—1,710kHz (at 10kHz step)
Antenna terminal	External antenna connector
Intermediate frequency	450kHz/10.71MHz
Sensitivity	35µV

SW1, 2 (E model)

Tuning range	SW1: 2,940—7,735kHz SW2: 9,500—18,135kHz (except for 10,140—11,575 kHz)
Antenna terminal	External antenna connector
Intermediate frequency	450kHz/10.71MHz
Sensitivity	35µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	30 W × 4 (at 4 ohms)

General

Output lead	Power antenna relay control lead Power amplifier control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 176 mm ($7\frac{1}{2} \times 2\frac{3}{8} \times 7$ in) (w/h/d)
Mounting dimension	Approx. 182 × 53 × 156 mm ($7\frac{1}{4} \times 2\frac{1}{8} \times 6\frac{1}{4}$ in) (w/h/d)
Mass	Approx. 1.2 kg (2 lb. 10 oz.)
Supplied accessories	Power connecting cord (1) Cord with connector (AUDIO) (1) Mounting hardware (1 set) Front panel case (1) Rotary Commander RM-X2S (XR-C620)

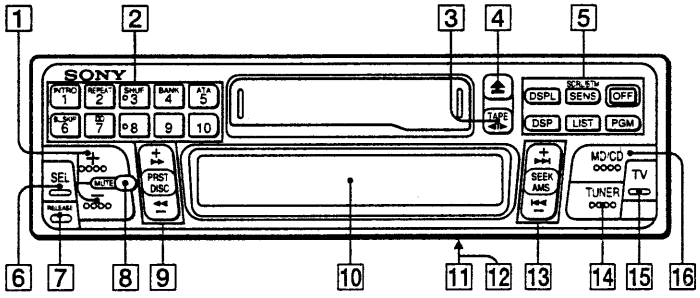
TABLE OF CONTENTS

Section *Title* *Page*

1. GENERAL

Button Locations 3
Setting the Clock 3
Cassette Player Operation 4
Radio/TV Reception 4
Station Memo Function 6
Other Functions 6
DSP Function 7
Connection 11

Button Locations



EN

Refer to the pages in ● for details.

1 (volume/bass/treble/balance/fader control) button ❻⓫⓬⓳⓴㉑㉒㉕㉖㉗㉘

2 During radio reception:
Preset number buttons ❾

During tape/CD/MD playback:

INTRO button ❼⓬⓯⓰

REPEAT button ❽⓯

SHUF button ⓰

BANK button ⓳㉓

ATA (Automatic Tuner Activation) button ❽⓫㉒

BL.SKIP button ❽⓭

DD (Dolby B NR or C NR) button ❼⓭

During CD/MD playback:

Direct disc selection button ⓯
For CD changers: INTRO 1 – 10
For MD changers: INTRO 1 – BANK 4

3 TAPE/◄II► (playback/transport direction change) button ❼㉕㉖㉗㉙㉚

4 ≙ (eject) button ❼⓬㉚

5 DSPL (display mode change/time set) button ❻⓫⓮㉒

SCRL/BTM SENS (Sensitivity adjust/Scroll/Best Tuning Memory Function) button ❽❾⓮

OFF (OFF) button ❺❻❼⓬

DSP (DSP mode on • off/select) button ㉕㉖㉗㉘㉙

LIST (custom file mode select • set/list up) button ❿⓫⓬⓰⓱㉑㉒㉓㉘㉙

PGM (program memory function) button ⓲⓳⓴

6 SEL (control mode select) button ❻⓫⓬⓭⓲⓳⓴㉒㉓㉕㉖㉗㉘㉙

7 RELEASE (front panel release) button ❺㉛

8 MUTE button ⓬

9 PRST (preset) /DISC button ❼❾❿⓮⓯⓰

10 Display window

11 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the installation/Connections manual.

12 LINE-OUT/IN SELECT switch (located on the bottom of the unit)
See "LINE-OUT/IN SELECT Switch" in the Installation/Connections manual.

13 SEEK/AMS button ❼❽⓮

14 TUNER (radio on/band select) button ❼❽❾❿⓫㉕㉖㉗㉙㉚

15 TV (television/video Select) button ❼❽❾❿⓫㉚

16 MD/CD (disc play • MD/CD changer select) button ❼⓮⓯㉒㉕㉖㉗㉙㉚

EN

Setting the Clock

The clock has a 12-hour digital indication.

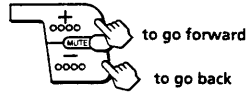
For example, setting it to 10:08

1 Display the time.
(Press the OFF or the DSPL button during unit operation.)

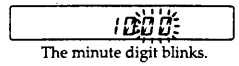
2 Press the DSPL button for more than two seconds.

The hour digit blinks.

Set the hour digits.

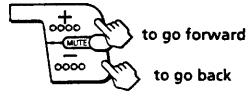


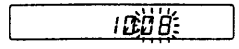
3 Press the ⏭ button momentarily.



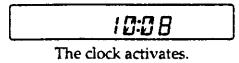
The minute digit blinks.

Set the minute digits.





4 Press the DSPL button momentarily.



The clock activates.

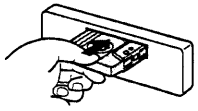
Note
If the POWER SELECT switch on the bottom of the unit is set to the B position, the clock cannot be set unless the power is turned on. Set the clock after you have turned on the radio, or started CD, MD or tape playback.

This section is extracted from XR-C620 instruction manual.

Cassette Player Operation

Listening to Tape Playback

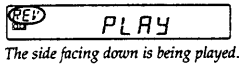
After inserting the cassette, playback will start automatically.



If a cassette is already inserted, press the [TAPE] button to start playback.
If you press during playback, the tape transport direction will change.

Indication of Tape Transport Direction

The side facing up is being played.



The side facing down is being played.

To stop playback,
eject the cassette by pressing the [⏏] button or press the [OFF] button.
Playback stops also when you select another source (radio, TV, CD or MD) by pressing the [TUNER], [TV] or [MD/CD] button.

Ejecting the Cassette

Press the [⏏] button.

To Fast-wind the Tape

Fast-forward

Rewind

To start playback during rewinding or fast-forwarding, press the [TAPE] button.

Playing a Tape Recorded in the Dolby B-NR or C-NR System

Press the [7] button when you want to listen to a tape recorded in Dolby B-NR or C-NR system. → "DD" appears on the display.

Each time you press the [7] button, the mode changes as follow:

→ Dolby B-NR → Dolby C-NR → Cancel →

Locating the Beginnings of the Tracks

— AMS (Automatic Music Sensor) Function

During playback, press either side of the SEEK/AMS button the number of times you wish to skip the tracks.

To locate the succeeding tracks

To locate the previous tracks

Up to nine tracks can be skipped.

If the blanks between the tracks are shorter than four seconds, or if there are noises, the AMS function will not work. Also, the unit may read long sections of low volume music or quiet sections on a track as blanks between tracks.

Searching the Desired Track — Intro Scan Function

Press the [INTRO] button during playback. → "INTRO" appears on the display.
The first 10 seconds of all the tracks are played. When you find the desired track, press the button once more. The unit returns to the normal playback mode.

Playing Tracks Repeatedly

— Repeat Play Function

Press the [REPEAT] button during playback. → "REP" appears on the display.
When the currently played track is over, it will be played again from the beginning.
To cancel this mode, press the button again.

Radio Reception during Fast-forwarding or Rewinding of a Tape

— ATA (Automatic Tuner Activation) Function

Press the [ATA] button during playback. → "ATA" appears on the display.
When fast-forwarding or rewinding with the PRST/DISC button, the tuner will turn on automatically.

Skipping Blanks Automatically during Tape Playback — Blank Skip Function

Press the [BL.SKIP] button during playback. → "BL.SKIP" appears on the display.
Blanks longer than eight seconds will be automatically skipped during tape playback.

Radio/TV Reception

TV reception can be made only when the optional TV tuner unit is connected to optional TV monitor.

Searching for the Stations Automatically

— Automatic Tuning

1 Select the desired band.

FM1 → FM2 → AM1 → AM2 → FM1

TV → VIDEO1 → VIDEO2* → TV

* *Only when the TV moniter is connected and "VIDEO2" mode is selected.*

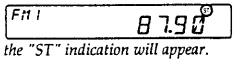
2 Press either side of the SEEK/AMS button to search for the station (automatic tuning).

For higher frequencies

For lower frequencies

The scanning stops when a station is received. Press either side of the button repeatedly until the desired station is received.

When an FM stereo program with a sufficient signal strength is tuned in,



the "ST" indication will appear.

To avoid the automatic tuning from stopping on stations too frequently (local seek mode), press the [SENS] button momentarily to get the "LCL" indication.
Only the stations with relatively strong signals can be tuned in. The local seek mode functions only when the automatic tuning is in operation.

If FM Stereo Reception is Poor — Monaural Mode

Press the SCRL/BTM SENS button momentarily.
→ "MONO" appears on the display.
The sound will improve, but it will become monaural.

Tuning in by Adjusting the Frequency (Channel)

— Manual Tuning

1 Select the desired band.

2 Press and hold either side of the PRST/DISC button.
Release the button when the desired station is received.

For higher frequencies

For lower frequencies

PREVENTING ACCIDENTS!
When tuning in during driving, use the automatic tuning and the memory preset tuning instead of the manual tuning.

Memorizing Stations Automatically

— BTM (Best Tuning Memory) Function

This function selects from the currently received band the stations with the strongest signals and memorizes them in order of their frequency.

1 Select the desired band.

2 Press the SCRL/BTM SENS button for more than two seconds.
- When there is no preset number indicated on the display window, stations will be stored on all preset number buttons on the currently selected band.
- When there is a preset number indicated on the display window, the unit will store stations on all preset number buttons from the one currently displayed.

For example, when you select FM2 and preset number 3 is displayed,
the operation will start from preset number 3 on FM2, and will stop at preset number 10 on FM2.

Note
During TV reception, the unit memorizes up to ten receivable stations in order of the channel numbers.

Memorizing Only the Desired Stations

1 Select the desired band.

2 Tune in the station which you wish to store on the preset number button.

3 Keep the desired preset number button (INTRO 1 to 10) pressed for about two seconds until you hear a beep tone.

The number of the pressed preset number button appears on the display window.

Up to 10 stations on each band (FM1, FM2, AM1, AM2 and TV) can be stored on the preset number buttons in order of your choice. Therefore, 20 stations can be memorized each on FM and AM.
If you try to store another station on the same preset number button, the previously stored station will be erased.

Receiving the Memorized Stations

1 Select the desired band.

2 Press momentarily the preset number button on which the desired station is stored.

Note
If you press the preset number button for more than two seconds, the currently received station will be memorized again. To receive the previously memorized station, make sure that the preset number button is pressed only momentarily.

Press either side of the PRST/DISC button momentarily to receive in order the stations stored in the memory (Preset Search Function).

Press momentarily

1 → 2 → ..... → 9 → 10 → 1 → ...

Press momentarily

1 → 10 → 9 → ..... → 2 → 1 → ...

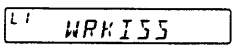
Searching for the Memorized Stations

— List-up Function

Displaying on the display window of the master unit:

Note
When the optional TV monitor is connected, the information will be displayed only on the monitor.

1 Press the LIST button momentarily.



Note
If the name of a station is registered, that name will be displayed. If the name of a station is not registered, the frequency of that station will be displayed. Refer to "Storing the Station Names in the Memory of the Tuner" for details.

2 Pressing the LIST button continuously will display in order the names of the stations on the currently received band.
Once the station name or the frequency has been displayed for over five seconds, the list-up function will be cancelled.

Turning off the Display
Press the DSPL button again.

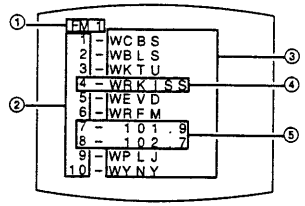
3 When you have found the desired station, press the PRST/DISC button to tune in the desired station.

Displaying the Contents of the Preset Memory

(with the optional TV tuner unit and TV monitor are connected)

Press the LIST button momentarily during radio/TV reception.

Example: When receiving the FM1 band



① **Band name**
② **Preset number**
③ **Registered station names*1**
④ **Currently tuned in station*2**
⑤ **Frequencies*1**

*1 *If the name of a station is registered, that name will be displayed. If the name of a station is not registered, the frequency of that station will be displayed.*
*2 *The name of the currently tuned in station will be displayed in magenta.*

Notes
- *It may take some time before all indications appear on the display.*
- *The TV screen does not come on during list display.*
- *The contents of the preset memory cannot be listed when the unit is in the simultaneous play mode (page 30).*

Turning off the Display

During radio reception, press the LIST button again.
During TV reception, the list display on the TV monitor will automatically turn off after a few seconds.

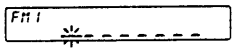
Station Memo Function

You can assign a name to each radio or TV station and store it in memory. The name of the station currently tuned in can be displayed on the display window. The steps below describe radio operation, but can be applied to TV operation as well.

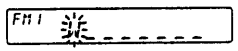
Storing the Station Names in the Memory of the Tuner

1 Tune in a station whose name you wish to register.

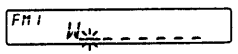
2 Press the LIST button for more than two seconds.
Enter the name edit mode.



3 Press either the + or − button to select the desired characters.



4 Press the SEL button after locating the desired character.



The flashing part moves to the next space on the right. Repeat steps 3 and 4 to enter the entire title. Up to eight characters can be used per station.

Notes

- *If you press the SEL button when the eighth character (farthest right character) is flashing, the flashing part goes back to the first character (farthest left character).*
- *If you wish to put a blank space after a character, select "_" (under-bar).*

5 Ⓐ To continue to the put titles onto the stations,

— press either side of the SEEK/AMS button momentarily to go to another station.

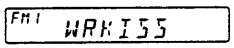
— press the TUNER button to select the next band.

Ⓑ To return to the normal radio/TV reception mode,

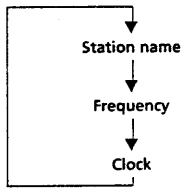
press the LIST button for more than two seconds.

Displaying the Registered Names

Press the DSPL button during radio/TV reception.



Each time you press the DSPL button during radio/TV reception, the display on the display window changes as follows:



** If the name of a station is not registerd, "NO NAME" will appear on the display window.*

Changing a Registered Name

Tune in a station whose name you wish to change, and perform steps 2 to 5 on this page to enter the name edit mode.

Erasing a Registered Name

1 Tune in any station.

2 Press the LIST button for more than two seconds.
Enter the name edit mode.

3 Press the A.1A/5 button while pressing the SEL button.

continue to next page →

4 Press either the + or − button to select the name that you wish to erase.

5 Press the SEL button for more than two seconds.
Repeat step 4 and step 5 if necessary.

6 Press the LIST button for more than two seconds.
The unit returns to the normal radio/TV reception mode.

The alternative method to erase a name
You can erase a title by selecting eight "_"s (under-bar) as described in step 3 of "Storing the Station Name in the Memory of the Tuner" (page 11).

Other Functions

Adjusting the Sound Characteristics

1 Select the item you want to adjust by pressing the SEL button repeatedly.

VOL (volume) →BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader) → VOL (volume)

2 Adjust the selected item by pressing either the + or − button.

Adjust within three seconds after selecting. (After three seconds the button will again serve as volume control button.)

Notes

- *When another digital pre-amplifier than XDP-U50D or a graphic equalizer is connected and the LINE-OUT/IN SELECT switch is set to ❷, "FAD" will not be displayed even with the SEL button pressed.*
- *When the optional XDP-U50D is connected, the fader settings can be set separately for the DSP on mode and DSP off mode.*
- *When you use a stereo graphic equalizer (not supplied), set the fader control to the center position and adjust the level with the equalizer.*

Muting the Sound Quickly

— Mute Function

Press the MUTE button. → The "MUTE" indication flashes.
The sound is muted at once. To restore the previous volume level, press again.

This function will be also canceled when:
— the + or OFF button is pressed.
— ejecting a cassette by pressing the ⏏ button during tape playback.

Changing the Illumination Color

Press the INTRO/1 button while pressing the SEL button.
You can choose the color between amber and green.

Storing the Sound Characteristics of each Source

— Source Tone Memory Function

Press the [BANK 4] button while pressing the [SEL] button. → "STM" will appear on the display.

This function memorizes the adjusted sound characteristics (the bass and treble) of each program source. With this function, you can listen to the same source always in the same sound characteristics even after changing the program source or tuning the unit off and on again.

To cancel the STM function, press these buttons again.

Note

When the optional XDP-U50D is connected, the STM function will not work.

Muting the Beep Tone

Press the [SLEEP 6] button while pressing the [SEL] button.
To obtain the beep tone again, press these buttons once more.

Enjoying Bass and Treble even at Low Volume

— Loudness Function

Press the [LOUD 7] button while pressing the [SEL] button. → "LOUD" will appear on the display.
Bass and treble will be reinforced. To cancel, press these buttons again.

Note

When the optional XDP-U50D is connected, the loudness function will not work.

Changing the Line Output Level

(when the optional XDP-U50D and a graphic equalizer are connected)

Press the [8] button while pressing the [SEL] button.

To cancel the mode, press these buttons again.

DSP Function

With the optional XDP-U50D connected

If you connect the optional XDP-U50D, you can add some effects to the soundfield of the currently selected program source.

Overview of the Digital Signal Processor (DSP) Function

The DSP can digitalize and process the audio signal with high speed thus enabling you to adjust the acoustic characteristics of the source sound without losing the sound quality. With the DSP unit you can control the audio output and adjust the acoustic characteristics according to your preference.

Notes

- *When the optional XDP-U50D and a graphic equalizer are connected, the reproduced sound may become distorted if the audio output signal of the graphic equalizer is boosted too much. In this case, press* **preset number button 8** *while pressing the* **SEL button**. *This will reduce the volume, but the distorted sound can be suppressed. To cancel the mode, press these buttons once again. (In case the optional XDP-U50D is connected by the optical cable, the volume will not get reduced even if you press preset number button 8 and the SEL button.)*
- *To improve the efficiency of the listening position setting, the volume of the output sound from the rear speakers is lowered automatically.*
- *When the optional XDP-U50D is connected, the loudness function and STM function will not work.*

The DSP edit mode

The DSP function includes following select/adjust modes:

- Surround (SUR) menu select/effect level control mode (see page 24)
- Listening position (LP) adjust mode (see page 26)
- Subwoofer (SUB) cut-off frequency/volume control mode (see page 27)
- Bass (BAS) adjust mode (see page 27)
- Treble (TRE) adjust mode (see page 27)
- Fader (FAD) adjust mode (see page 28)

Display window	Selected mode	Adjustment of
SUR	Surround menu	Effect Level
LP1	Listening position	Left, right, front and rear listening position
SUB	Cut-off frequency	Subwoofer volume
BAS	Bass turn-over frequency	Bass volume
TRE	Treble turn-over frequency	Treble volume

In addition, there are also following DSP-related functions:

- DSP custom file function (see page 28)
- Last sound memory function (see page 29)

Selecting the Surround Mode

This unit features ten preset surround modes. You can select your desired surround mode to suit the source audio. These modes can simulate different soundfields so that you can enjoy the sensation of being close to the music source or being at a live concert etc.

Surround Menu

HALL	Concert hall
JAZZ	Jazz club
DISCO	Disco with thick walls
THEATER	Movie theater/cinema
PARK	Big open space
LIVE	Live concert
OPERA	Opera house
CHURCH	Church/chapel with a lot of reverberation
STADIUM	Open-air concert in a stadium
CELLAR	Cellar with a lot of reverberation
DEFEAT	Normal mode without any DSP effects*

** The surround mode will be canceled. However, other preset levels of the DSP function menu can be adjusted.*

1 Select a program source (tape, radio, CD or MD) by pressing the TAPE, TUNER or MD/CD button.

2 Press the DSP button for more than one second. → "DSP" appears on the display.
Enter the surround menu select mode.

3 Press either the + or − button to select the desired surround menu.

+ HALL → JAZZ → DISCO → ..... → DEFEAT → HALL

− CELLAR → STADIUM → CHURCH → ..... → DEFEAT → CELLAR

Note
If the "DEFEAT" mode is selected, the sound will be restored to the original state without any effects. (The "DSP" indication will disappear.)

4 Press the DSP button for more than one second.
You can continue to listen with the selected surround menu.

To cancel, press the DSP button momentarily. → "DSP" disappears from the display.

Adjusting the Effect Level

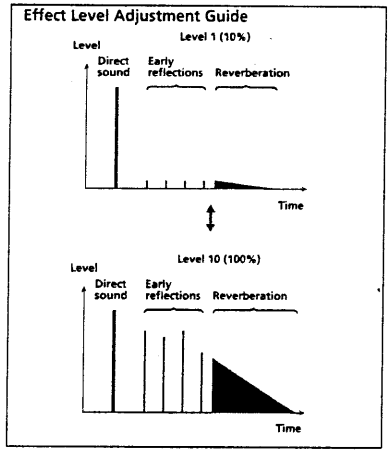
Balance and level of the reflections and of the reverberation of the selected surround mode can be adjusted.

1 Select the surround mode by performing steps 1 to 3 noted above.

2 Press the SEL button momentarily.
Enter the effect level adjust mode.

3 Press either the + or − button to select the desired level.

You can adjust from 0 to 10. The higher the percentage, the more resembles the sound a live performance.



4 Ⓐ To continue to adjust the effect level of another surround menu,
press the SEL button momentarily.

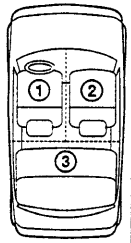
Ⓑ To cancel the effect level adjust mode,
press the DSP button for mode than one second.

To stop the setting procedure,
Press the DSP button for more than one second.

To change the effect level to the original (factory-set) setting,
Press the SEL button for more than two seconds.

Selecting the Listening Position

The time it takes for the sound from the speakers to the listener can be selected. Even in an imperfect listening environment, such as inside a car, it is possible to simulate a natural soundfield so that a listener can feel as if he is in the center of the soundfield wherever he sits in the car.

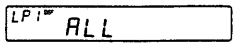


Display window	Center of soundfield
LP1 ALL	Normal setting (① + ② + ③)
LP2 FRONT	Front part (① + ②)
LP3 FRONT R	Right front (②)
LP4 FRONT L	Left front (①)
LP5 REAR	Rear part (③)

1 Select a program source (tape, radio, CD or MD) by pressing the TAPE, TUNER or MD/CD button.

2 Press the DSP button for more than one second. → "DSP" appears on the display.

3 Press the DSP button momentarily several times until you get the "LP1" indication.
Enter the listening position adjust mode.



4 Press either the + or − button to select the desired level.

By pressing either the + or − button repeatedly, the listening position indication in the display window will change as follows:

+ ALL (LP1) → FRONT (LP2) → ..... → REAR (LP5) → ALL (LP1)

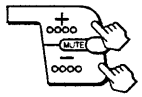
− ALL (LP1) → REAR (LP5) → ..... → FRONT (LP2) → ALL (LP1)

5 To cancel the listening position adjust mode,
press the DSP button for more than one second.

Setting the listening position more specifically

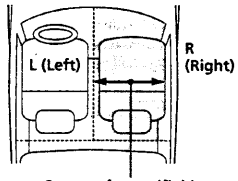
1 After selecting the listening position by performing steps 1 to 3, press the SEL button.
Enter the left/right balance adjust mode.

2 Press either the + or − button to set the center of the soundfield.



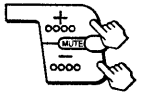
Center moves toward R (right).
Center moves toward L (left).

For example, adjustment of the left/right balance of "LP3"



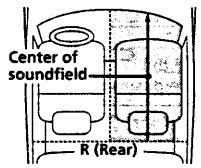
3 Press the SEL button.
Enter the front/rear balance adjust mode.

4 Press either the + or − button to set the center of the soundfield.



Center moves toward R (rear).
Center moves toward F (front).

For example, adjustment of the front/rear balance of "LP3"

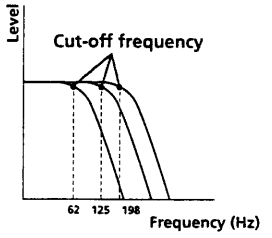


5 Ⓐ To continue to adjust another the listening position,
press the SEL button momentarily.

Ⓑ To cancel the balance adjust mode,
press the DSP button for more than one second.

Adjusting the Cut-off Frequency and Volume of the Subwoofer(s)

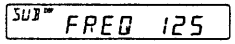
To match the characteristics of the connected subwoofer(s), you can cut the unwanted high and middle frequency audio signal entering the subwoofer(s). The frequency at which the audio signal is cut off is called the cut-off frequency. By setting the cut-off frequency, the subwoofer(s) will output only low frequency signals so that a clearer sound image can be created.



1 Select a program source (tape, radio, CD or MD) by pressing the TAPE, TUNER or MD/CD button.

2 Press the DSP button for more than one second. → "DSP" appears on the display.

3 Press the DSP button momentarily several times until you get the "SUB" indication.
Enter the cut-off frequency adjust mode.



4 Press either the + or − button to select the desired cut-off frequency.

By pressing either the + or − button repeatedly, the listening position indication in the display window will change as follows:

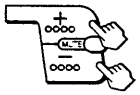
+: 62 Hz → 78 Hz → 99 Hz → 125 Hz* → 157 Hz → 198 Hz

−: 198 Hz → 157 Hz → 125 Hz* → 99 Hz → 78 Hz → 62 Hz

* Factory-set frequency

5 Press the SEL button momentarily.
Enter the volume control mode.

6 Press either the + or − button to adjust the volume.



Subwoofer volume increases.

Subwoofer volume decreases.

Note
At the lowest volume setting the subwoofer sound will be completely cut out (submute).

7 Ⓐ To continue to select another the cut-off frequency,
press the SEL button momentarily.

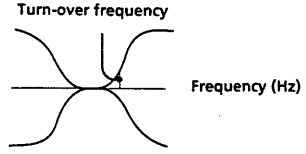
Ⓑ To cancel the cut-off frequency adjust mode,
press the DSP button for more than one second.

Stopping the setting procedure
Press the DSP button for more than one second.

Changing the cut-off frequency to the original (factory-set) setting
Press the SEL button for more than two seconds.

Adjusting the Bass and Treble

When the bass or treble frequency is changed, the original frequency is called the turn-over frequency. By selecting the bass or treble turn-over frequencies, you can control the volume thus matching the acoustic characteristics inside your car.



1 Select a program source (tape, radio, CD or MD) by pressing the TAPE, TUNER or MD/CD button.

2 Press the DSP button for more than one second. → "DSP" appears on the display.

continue to next page →

3 Press the DSP button momentarily several times to get the "BAS" or "TRE" indication.
Enter the bass or treble adjust mode.

Bass adjust mode

Treble adjust mode

4 Press either the + or − button to select the turn-over frequency.

By pressing either the + or − button repeatedly, the turn-over frequencies in the bass adjust mode will change as follows:

+: 198 Hz → 250 Hz → 314 Hz* → 396 Hz

−: 396 Hz → 314 Hz* → 250 Hz → 198 Hz

* Factory-set frequency

By pressing either the + or − button repeatedly, the turn-over frequencies in the treble adjust mode will change as follows:

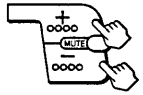
+: 2.0 kHz → 3.1 kHz* → 4.0 kHz → 5.0 kHz

−: 5.0 kHz → 4.0 kHz → 3.1 kHz* → 2.0 kHz

* Factory-set frequency

5 Press the SEL button momentarily.
Enter the volume control mode.

6 Press either the + or − button to adjust the volume.



Bass or treble volume is boosted.

Bass or treble volume is cut.

7 Ⓐ To continue to select another the turn-over frequency,
press the SEL button momentarily.

Ⓑ To cancel the bass or treble adjust mode,
press the DSP button for more than one second.

To stop the setting procedure
Press the DSP button for more than one second.

To change the bass or treble to the original (factory-set) setting
Press the SEL button for more than two seconds.

Fader (FAD) Adjustment

The fader can be adjusted separately for the DSP on mode and DSP off mode. Normally, with the DSP mode on, the volume of the output sound from the rear speakers is lowered automatically to improve the efficiency of the listening position setting. If you want to raise the rear speaker volume, adjust the fader.

For this operation, refer to page 12.

DSP Custom File Function

(With Optional CD changer(s) connected)

Registering Surround Modes onto Discs

Once you have registered the desired surround modes onto the discs, you can enjoy the same surround modes every time you play these discs. (With one CD changer, you can register surround modes onto a maximum of 110 discs. See page 21 for more details.)

Note
Before registering the DSP custom file, make sure that you have titled the discs (page 21).

1 Play the disc whose surround mode you wish to register.

2 Press the LIST button for more than two seconds.
Enter the name edit mode.

Note
If the disc has no title, "_ _ _ _ _ _" will appear in the display window. Refer to "Putting Your Personalized Titles onto the CDs" on page 21.

3 Press the LIST button momentarily twice.
Enter the DSP file registering mode.

4 Press either the + or − button to select the surround menu.

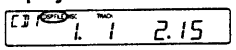
+: HALL → JAZZ → DISCO → ..... → DEFEAT → HALL

−: CELLAR → STADIUM → CHURCH → ..... → DEFEAT → CELLAR

5 Press the [LIST] button for more than two seconds.
Enter the normal CD playback mode.

Playing in the DSP Custom File Mode

Press the [DSP] button while pressing the [SEL] button during CD playback. → "DSP" and "FILE" appears on the display.



To cancel, press these buttons again.

Notes

- *When you press the DSP button during CD playback in the DSP custom file mode, the surround mode will be canceled. However, if you change the disc, the new disc will be played in the surround mode registered in the DSP custom file.*
- *If no surround mode is registered on a disc, the "DSP" indication will not appear.*

Changing the registered surround mode

Play the disc whose surround mode you wish to change, and repeat from step 2 on page 28 to step 5.

Erasing the registered surround mode

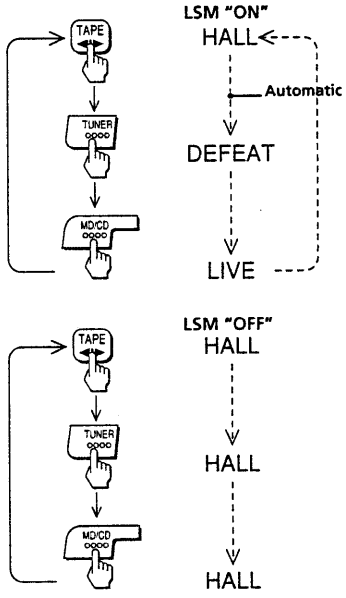
Select the DEFEAT mode in step 4 on page 28.

Listening to each Program Source in its Registered Surround Mode

— LSM (Last Sound Memory) Function

This function memorizes the last-selected surround mode of each program source. With this function, you can listen to the same source always in the same surround mode even after changing the program source or turning the unit off and on again.

For example, if you listen in following order to a MD in the "HALL" mode, to the radio in the "DEFEAT" mode, to a CD in the "LIVE" mode and change then to MD playback, the surround mode will automatically change to "HALL". If you change then to radio, the surround mode will change to "DEFEAT".

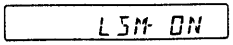


Note

Even with the LSM function off, it is possible to change the surround mode manually.

Playback with the LSM Function

Press the [10] button while pressing the [SEL] button. → "LSM" appears on the display.



To cancel, press these buttons again.

Note

When you play a CD in the DSP custom file mode, the various surround modes registered on the discs will change automatically even when the LSM function is on.

Error displays (with the optional CD/MD changer(s) connected)

The following indications will flash for about five seconds and an alarm sound will be heard.

Display	Cause	Solution
NO MAG	The disc magazine is not inserted in the CD/MD changer.	Insert the disc magazine with discs into the CD/MD changer.
NO DISC	No disc is inserted in the disc magazine.	Take out the magazine and insert the discs.
ERROR	The disc is dirty.	Clean the disc*.
	The disc is inserted upside down.	Insert the disc correctly.
RESET	The CD/MD changer cannot be operated because of some problem.	Press the reset button of the unit.
NO READY	The lid of the MD changer is open or MDs are not inserted properly.	Close the lid or inserted the MDs properly.
BLANK	No tracks have been recorded on the MD.	Play a MD with recorded tracks on it.
HI TEMP	The ambient temperature is more than 50°C.	Wait until the temperature goes down below 50°C.

** In case of a MD, insert another MD.*

If the above-mentioned solutions do not help to improve the situation, consult your nearest Sony dealer.

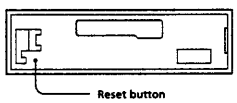
Connection

Caution

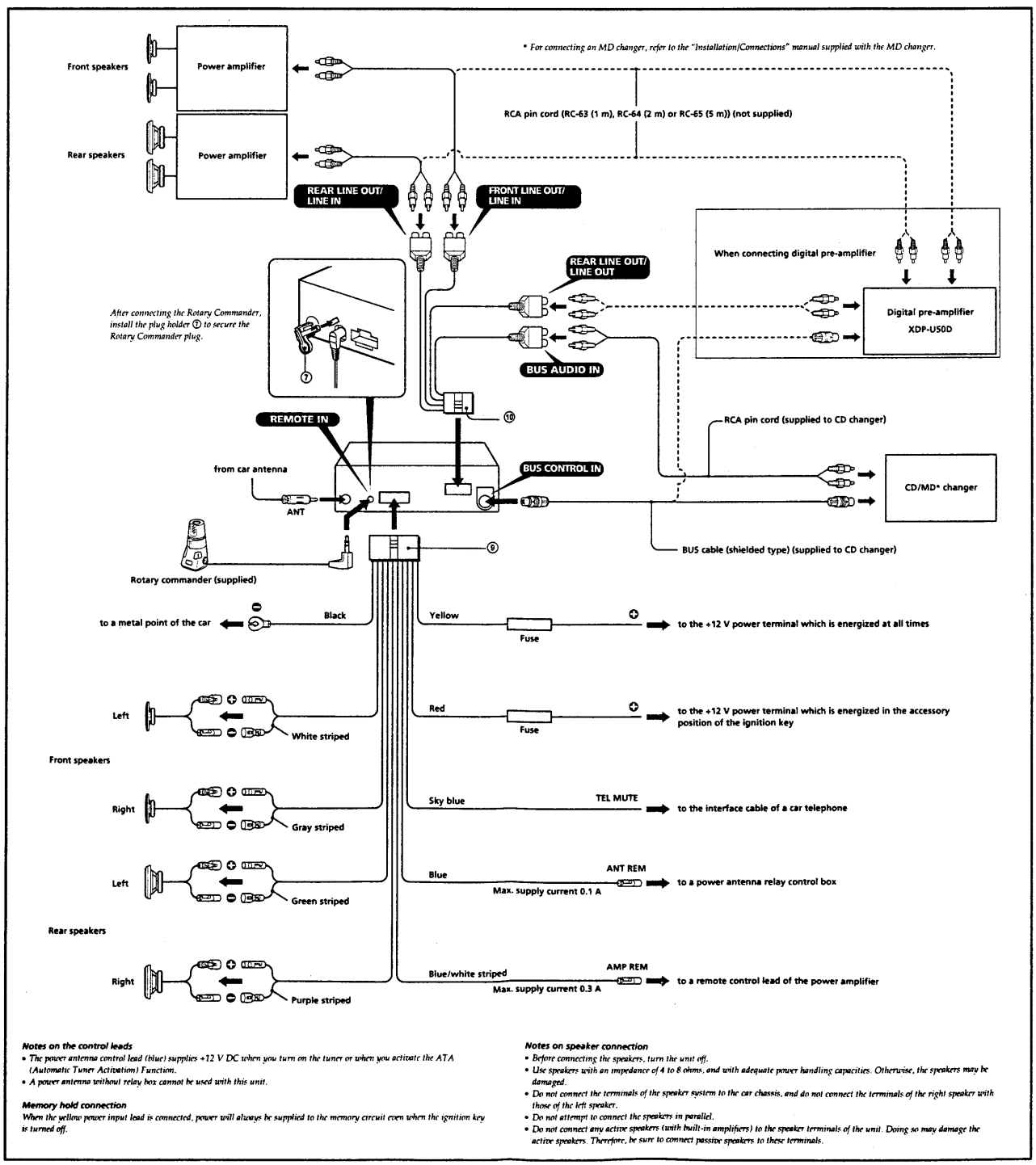
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**

Reset Button

When the installation and connections are over, be sure to press the reset button with a ball-point pen etc. The reset button is located on the left of the connector on the unit side when the front panel is detached.



Connection Example


* For connecting an MD changer, refer to the "Installation/Connections" manual supplied with the MD changer.
Front speakers
Power amplifier
Rear speakers
Power amplifier
RCA pin cord (RC-63 (1 m), RC-64 (2 m) or RC-65 (5 m)) (not supplied)
REAR LINE OUT/ LINE IN
FRONT LINE OUT/ LINE IN
When connecting digital pre-amplifier
REAR LINE OUT/ LINE OUT
Digital pre-amplifier XDP-U50D
BUS AUDIO IN
After connecting the Rotary Commander, install the plug holder ⑦ to secure the Rotary Commander plug.
⑦
⑩
REMOTE IN
RCA pin cord (supplied to CD changer)
from car antenna
ANT
BUS CONTROL IN
CD/MD* changer
⑨
BUS cable (shielded type) (supplied to CD changer)
Rotary commander (supplied)
to a metal point of the car
Black
Yellow
Fuse
to the +12 V power terminal which is energized at all times
Left
White striped
Red
Fuse
to the +12 V power terminal which is energized in the accessory position of the ignition key
Front speakers
Right
Gray striped
Sky blue
TEL MUTE
to the interface cable of a car telephone
Left
Green striped
Blue
ANT REM
Max. supply current 0.1 A
to a power antenna relay control box
Rear speakers
Right
Purple striped
Blue/white striped
AMP REM
Max. supply current 0.3 A
to a remote control lead of the power amplifier

Notes on the control leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation) Function.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

If Your Car has No Accessory Position on the Ignition Key Switch

— POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear if **your car has no accessory position on the ignition key switch.** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the ❶ position, then press the reset button.** The illumination is reset to stay off while the unit is not being played.

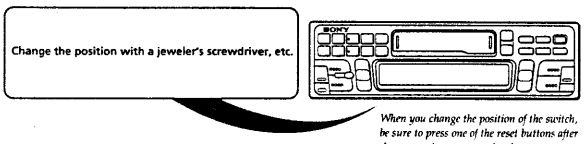
Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ❶ position.

When a digital pre-amplifier etc. is connected

— LINE-OUT/IN SELECT Switch

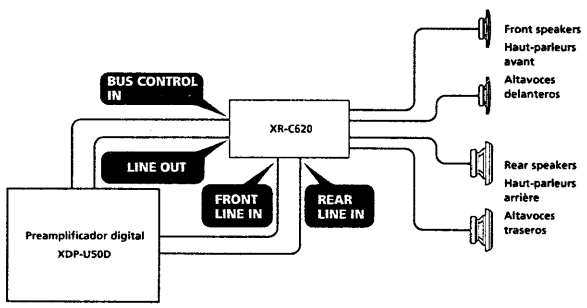
Set the LINE-OUT/IN SELECT switch, which is on the underside of the unit, to position ❷, so that the LINE-OUT/IN terminal will function as LINE-IN terminal.
With the switch in position ①, the terminal will work as LINE-OUT terminal.



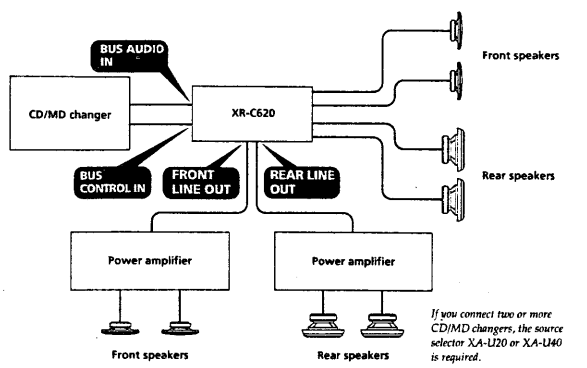
When you change the position of the switch, be sure to press one of the reset buttons after the connections are completed.

Connection Diagram

Example 1 Set the LINE-OUT/IN SELECT switch to position ❷.

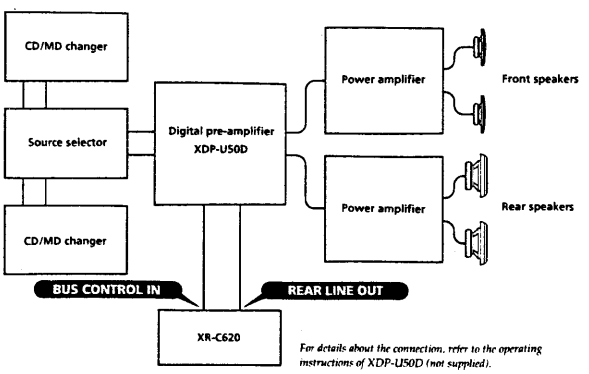


Example 2 Set the LINE-OUT/IN SELECT switch to position ①.



If you connect two or more CD/MD changers, the source selector XA-U20 or XA-U40 is required.

Example 3 Set the LINE-OUT/IN SELECT switch to position ①.



For details about the connection, refer to the operating instructions of XDP-U50D (not supplied).